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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/607,698 | 06/27/2003 | M. Benton Free | 58399US002 | 7675 |
| 20311 | 7590 | 04/18/2005 | EXAMINER | |
| MUSERLIAN, LUCAS AND MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016 | | | PARKER, FREDERICK JOHN | |
| ART UNIT | | PAPER NUMBER | | 1762 |

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|---------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/607,698 | FREE ET AL. |
| | Examiner Frederick J. Parker | Art Unit 1762 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) 25-28 is/are allowed.
- 6) Claim(s) 1-3,5-16 and 18-24 is/are rejected.
- 7) Claim(s) 4 and 17 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 June 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9-22/03;11/5/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title is too generic.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 12-29 been renumbered 11-28, respectively.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-2,5-15, 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haubrich et al US 2003/0203101 in view of Lemelson US 5866195.

Haubrich et al teaches forming patterned structures on a substrate to form electrophoretic displays, circuits, etc. The process steps comprise printing on the substrate a strippable polymer-based maskant material which represents the desired pattern; depositing on the patterned substrate a conductive metal which is substrate adherent; and removing the strippable material with conductive material thereon by means including mechanical (physical stripping/ adhesive tape peeling, [0043]. It is the Examiner's position that this would have reasonably suggested other mechanical/ physical means well-known to remove coatings such as impact/ media blasting. The process leaves conductive material on surfaces where the strippable maskant was NOT present, and vice-versa [0029]. The strippable maskant polymer pattern is applied by printing methods such as screen printing, ink jet, gravure, etc [0018]. The method provides the benefit of a simpler, cleaner method than photolithography or etching to selectively form patterned surfaces. Applying a second, substrate adherent polymer rather than a metal to the patterned substrate surface is not taught. However, Lemelson teaches that conductive polymers

may be used for circuitry and other electronic applications, and may be applied to substrates by dip or roller coating, etc [col. 21, 39-51], and further col. 22, 19-25 teaches the equivalence of such conductive polymers with metals and semiconductors, and the replacement of such conventional materials by the conductive polymers, because of the expectation of equivalent electrical conduction. Per claim 2, the strippable maskant polymer necessarily has a lower surface energy than the substrate adherent polymer to allow its removal while maintaining the conductive polymer on the substrate. Thus, it would have obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Haubrich et al by substituting the conductive polymers of Lemelson for the metals of the conductive layer of Haubrich et al because of the expectation of forming patterned conductive articles for electronic applications, wherein the conductive polymers substituted for the conductive metals would have reasonably provided equivalent performance.

As to claims 5-8, 18-22, the dimensions and height of the polymer would have been determined by the skilled artisan using routine experimentation for any desired end-use application.

7. Claims 3,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haubrich et al US 2003/0203101 in view of Lemelson US 5866195 and further in view of Laubacher et al US 5759625.

Haubrich et al and Lemelson are cited for the same reasons previously discussed, which are incorporated herein. A fluoropolymer-based maskant material is not cited.

Laubacher et al teaches on column 1, 43-50 that amorphous fluoropolymers have a “smooth, non-stick character” which resists adherence to other polymers, properties which would make the

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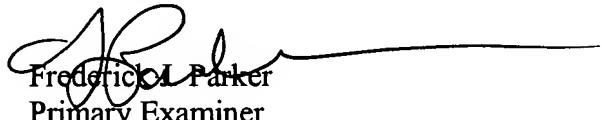
fluorocarbon polymer beneficial as the strippable polymer-based maskant of Haubrich et al. Therefore, it would have obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Haubrich et al in view of Lemelson by utilizing the fluorocarbon polymer materials of Laubacher et al as the strippable maskant because of the low adhesion properties of the fluoropolymer materials, which would make them readily strippable.

8. Claims 4,17,25-28 distinguish over the prior art which does not teach nor suggest to apply a continuous substrate-adherent polymer comprising a polyamide. Dependant claims 4,17 are objected to for depending from a rejected base claim. Claims 25-28 are allowed. All claim numbers refer to renumbered claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meeks Timothy can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frederick L. Parker
Primary Examiner
Art Unit 1762

fjp